

USING CMS VERSIONS 5 OR 5.2 WITH THE 1520 PRINTER/PLOTTER

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>> INITIAL SET-UP PROCEDURE:

- 1.) LOAD your copy of CMS versions 5 or 5.2 into your 2068.
- 2.) Select from the CMS home menu the "Q"UIT option.
- 3.) Type LOAD "" CODE or LOAD "cms/1520" CODE and play the tape to load in the CMS/1520 driver. This will be a very quick load as the code block is only 232 bytes long.
- 4.) Type LIST 950 and then EDIT line 950 to include the command OUT 63,7 immediately after the line number. i.e.:
950 OUT 63,7:.....(rest of original line 950 here).....
- 5.) Type as direct commands:
POKE 39847,13 (required for EJECT to work)
POKE 36960,2 (set print-out page spacing to 2)
POKE 36964,0 (set print-out left margin to 0)
POKE 36968,40 (set print-out line length to 40)
NOTE: The last three POKES are only suggested print-out settings. You may wish to define them differently or to leave them alone.
- 6.) Type RUN and press ENTER.
- 7.) Choose "B"ACKUP from the home menu to make your own working copy of CMS/1520.

>> 1520 SPECIFIC GUIDELINES:

The following instructions are intended only to familiarize a user with helpful hints and suggestions specific only to the use of CMS with the 1520 printer/plotter. It is assumed that the user has a basic prior understanding of CMS and/or has access to Jack Dohany's CMS reference manual.

>> AN IMPORTANT REMINDER:

1520 I/F initialization must occur BEFORE the 1520 is turned on. The initialization command (OUT 63,7) has been added to CMS BASIC and therefore CMS must be loaded and run before turning on the 1520.

>> TWO DEAD HOME MENU COMMANDS:

Two commands from the home menu are no longer effective. They are the LFEED and INTERFACE commands. These commands are over-written by the CMS/1520 driver code. The choice of a linefeed is part of the driver code and the driver code is so large that it takes up memory previously used by the AERCO, TASMAN, A&J, and TIMEX 2040 I/F drivers. This makes CMS/1520 only able to print to the 1520 regardless of INTERFACE selection.

>> BREAKING DURING PRINT-OUT:

The space bar is the key to press for aborting a print-out. CMS/1520 checks only for a break at the end of each line and therefore the space bar may have to be held down for a few seconds until the line is printed and it can be tested. For reasons unknown to me, a break is not checked for at the end of the first line - only at the end of every line there-after. Also, if you have selected to print more than one copy, a break will stop only the current copy. The abortion of successive copies will have to be done with as many breaks.

>> IMBEDDED PRINT CODES:

Print codes are defined as usual in a format line. You can define all of the 1520's print codes by entering the following format line somewhere at the beginning of your text:

>#0=24/0,#1=25/0,#2=26/0,#3=27/0,#4=28/0,#5=29/0,#6=30/0,#7=124/0\

where:

- 0 = plot command
- 1 = pen color change
- 2 = character size
- 3 = character rotation
- 4 = dashed line
- 5 = UPPER/lower or LOWER/upper case
- 6 = reset the 1520
- 7 = carriage return without linefeed

Print codes 0-6 (as defined above) must be imbedded as separate and individual text lines and MUST start in column one.

Example: To print "This is blue ink, this is red ink." in blue and red ink and in 40 cpl character size:

right way: col. 1

@21\	(select 40 cpl char. size)
@11\	(select blue ink)
This is blue ink, \	(print 1st part)
@13\	(select red ink)
@0M216,19\	(move to position)
this is red ink.\	(print 2nd part)

wrong way: col. 1

@21@11This is blue ink, @13this is red ink.\

Print code 7, as defined in the previous format line, produces a carriage return without linefeed when used in the middle of a sentence. The character "/" obtained by simultaneously pressing symbol shift and the "W" key will not be printed but will also cause a carriage return without linefeed.

Example: XXX@7000\ or XXX/000\ will be printed as 000

The pre-defined tokens "+" and "-" have the following effects:

Example: Token @+test@+ one.\ will be printed as:
Token ttteesssttt one.

Example: Token @-test@- two.\ will be printed as:
Token _t_e_s_t two.

>> FIVE USEFUL CHARACTERS:

KEY	ON-SCREEN	1520 PRINT-OUT
SS+Q	{	←
SS+E	}	△
SS+A	~	π
SS+S	@	□
SS+D	\	

>> CHARACTER/LINE STEP SIZE CALCULATIONS:

One must often calculate x/y pen movements in terms of line and character increments. The step width and height of a single character block is given for each of the four char. sizes:

80 cpl=6x9 40 cpl=12x19 20 cpl=24x39 10 cpl=48x79

Thus, if you are set to 40 cpl, to move the pen up three lines and over ten character widths you would type this line:

@0M120,57\ (remember the "@" has to be in column one!)

where 57 = 3 ^{lines} chars. X 19 steps/line and

120 = 10 ^{chars.} lines X 12 steps/char.